

Overview of Strategies for Logistics and Shipper Companies





A Glance at Clean Freight Strategies

By collaborating with their carriers, suppliers, shippers and other partners, logistics companies often find that they can move and deliver their goods more efficiently and quickly in the supply chain network. Other important benefits include gains in overall supply chain performance, sustainability, and customer satisfaction. The strategies presented in this overview identify ways that logistic companies can achieve these benefits.

ABOUT SMARTWAY

EPA's SmartWay Partnership helps companies benchmark freight performance and make informed decisions that drive sustainable supply chains.



To accomplish this, SmartWay:

-  Establishes a common yardstick for comparing emissions performance.
-  Drives effective freight operational, mode and technology choices.
-  Provides a platform for Partners and Affiliates to share real-world experiences, innovations, and best practices.
-  Helps companies make freight decisions that have a positive impact on efficiency and the environment.

CARRIER FREIGHT MATCHING FOR LOGISTICS AND SHIPPER COMPANIES

Carrier freight matching approaches help partner shippers with carriers in ways that reduce empty truck miles, including digital freight matching (DFM) and using industry knowledge or more traditional outreach to identify nearby carriers to eliminate deadhead miles.



Benefits include:

-  **Reduce deadhead miles.** Algorithmic load bundling, in which carriers can book a bundle of two loads on a DFM app, can reduce deadhead miles by more than 20%.
-  **Cost savings.** During the freight-matching process, companies can compare the prices of different carriers and choose the most cost-effective option.





CO-LOADING FOR LOGISTICS AND SHIPPER COMPANIES

Consolidation of loads when companies collaborate on transporting less-than-truckload (LTL) shipments to similar locations.

-  **For shippers.** A reduction in transportation costs of up to 30% on certain lanes, shorter lead times, and lower likelihood of product loss or damage.
-  **For the environment.** Full truckload shipments with more direct routes from origin to destination yield reduced vehicle miles traveled and associated greenhouse gas emissions.

CONTINUOUS MOVE PLANNING FOR LOGISTICS AND SHIPPER COMPANIES

Continuous move planning involves a shipper or third-party logistics provider (3PL) building a string of loads for their carrier to reduce or eliminate deadhead mileage. Freight-under-management 3PL can help shippers improve efficiency by offering a continuous move service.



-  **Reduced costs.** The reduction in vehicle miles traveled leads to savings in fleet costs, fuel costs, and labor costs. Estimates are that using planning software can reduce operating costs by 5 to 15%.
-  **Environmental benefits.** By reducing vehicle miles traveled, this strategy helps reduce greenhouse gas emissions..

Overview of Strategies for Logistics and Shipper Companies *(continued)*

IMPROVED DRAYAGE OPERATIONS THROUGH APPLICATION OF REAL-TIME DATA

Real-time data-based technologies, including mobile applications, radio frequency identification, electronic on-board recorders, and sensors that enhance communication and organization at ports can significantly enhance the efficiency and transparency of drayage operations. These tools can be used to: provide drivers with more information; match containers and drivers and analyze data to improve operations.



Benefits include:

-  **Saves fuel and reduces emissions.** A typical port drayage truck could save 131 gallons of fuel in a year from reduced idling and cut CO2 emissions by 2,942 pounds.
-  **Time savings.** Projections to reduce the time trucks spend in ports is about 25 percent.

INVENTORY MANAGEMENT AS A SHIPPING STRATEGY FOR LOGISTICS AND SHIPPER COMPANIES

Third-party logistics providers (3PLs) can work with customers to consolidate orders into larger, less frequent shipments. This strategy is most applicable to 3PLs that are involved in shippers' long-term transportation decision-making.



Benefits include:

-  **Shipping.** Reduced frequency of orders can reduce shipping costs.
-  **Emissions reduction.** Reducing frequent LTL deliveries and converting to full truckload can be faster, cheaper, more reliable and can also help reduce CO2 emissions. LTL pick-up and delivery operations account for roughly 30% of the CO2 generated by an individual LTL shipment.

LESS-THAN-TRUCKLOAD FREIGHT CONSOLIDATION FOR LOGISTICS AND SHIPPER COMPANIES

Less-than-Truckload Freight Consolidation occurs when a shipper or third-party logistics provider combines multiple less-than-truckload (LTL) freight shipments within a geographic region into a single truckload (TL). This strategy may also involve consolidating LTL shipments by converting to rail or ocean carrier.

Benefits include:

-  **Fewer shipments.** Converting from LTL to TL mode means that a company has fewer shipments and thus fewer pickups, fewer deliveries, and less paperwork/processing.
-  **Sustainability.** The carbon footprint can be reduced by consolidating LTL to TL because fewer trucks are used. When intermodal can be introduced, further improvements can be made to the linehaul. Not only are emissions reduced, but road congestion too.





Please visit the SmartWay website at www.epa.gov/smartway to access more tech bulletins.



LOAD OPTIMIZATION FOR LOGISTICS COMPANIES

To increase the efficiency of the load, companies can use strategies such as side loading, using lighter shipping containers, and requiring a minimum order size. By increasing how much freight each truck can carry, these strategies reduce fuel use and emissions on a ton-mile basis.

Benefits include helping companies:

-  **Improve fleet efficiency**
-  **Improve reliability**
-  **Improve efficiency of dock operations**
-  **Customer savings**

MERGE-IN-TRANSIT FOR LOGISTICS AND SHIPPER COMPANIES

Merge-In-Transit (MIT) occurs when shipments from multiple origins are merged into one larger shipment before delivery at the final destination. Because this strategy can eliminate the need to warehouse products, it can be especially beneficial for products with substantial inventory carrying costs such as high-value products, bulky products, and products with high depreciation or obsolescence costs.

MIT yields various benefits for suppliers, carriers, and customers including:



-  **Inventory**
-  **Product assembly**
-  **Waste**
-  **Shipping**
-  **Customer service**



ROUTE OPTIMIZATION FOR LOGISTICS COMPANIES

Route optimization software minimizes truck miles of travel and can take into account the orders that need to be shipped, delivery time windows, vehicle characteristics, route restrictions, and hours of service limitations to create the most efficient delivery routes.

Benefits include:




-  **Better business operations.** Increased transparency that creates more accurate cost projections, improved customer service, improved planning and strategic modeling.
-  **Environmental.** Route optimization can reduce travel by about 2,500 miles a year for the average driver— equivalent to 3 metric tons of carbon dioxide.

2,500
miles reduced

SUPPLIER SOURCING FOR LOGISTICS AND SHIPPER COMPANIES

Supplier sourcing is the selection of product suppliers by a receiving business based on location. Using supplier location as a selection factor can reduce the miles driven and the emissions generated when transporting products for delivery.



Logistics providers can use their knowledge of suppliers to help receiving companies identify closer sourcing opportunities, which can:

-  **Reduce vehicle miles traveled**
-  **Reduce fuel costs and emissions**
-  **Save time**

RIGHTSIZING EQUIPMENT AND FLEETS FOR LOGISTICS AND SHIPPER COMPANIES

Rightsizing refers to the fleet management practice of ensuring that the right vehicles are used for a specific task. For third-party logistics providers (3PLs) it consists of two elements: matching the load with the vehicle (rightsizing equipment) and matching all of the 3PL's freight vehicles with the business needs of the 3PL (rightsizing the fleet).

Rightsizing can help companies with:

-  **Vehicle savings.** This strategy often involves minimizing the number of large vehicles, keeping just enough to meet maximum capacity. The costs savings can be substantial. In 2020, a class 8 truck costs an average of \$145,000, compared to \$75,000 for a class 7 truck.
-  **Fuel savings, emissions benefits.** Smaller, more lightweight vehicles are not only typically cheaper, but also burn less fuel and generate fewer emissions. Class 6 trucks have 9% better fuel economy than class 7 trucks, on average. One snack producer used this strategy and transitioned from class 6 trucks to class 5 trucks for urban grocery store deliveries, saving approximately 10% on fuel costs.

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